

*[Handwritten signature]*



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
007,797,000	07/23/97	HELLER, JIM	LAR-15345-2

US 07/0730  
NASA LANGLEY RESEARCH CENTER  
MAIL STOP 212  
8 LANGLEY AVENUE  
HAMPTON VA 22681-0001

EXAMINER  
LORTIN, P

ART UNIT	PAPER NUMBER
1301	

DATE MAILED: 07/25/97

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

08/797,553

Applicant(s)

Hellbaum et al

Examiner

Francis Lorin

Group Art Unit

1301



☐ Responsive to communication(s) filed on \_\_\_\_\_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-8 \_\_\_\_\_ is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-8 \_\_\_\_\_ is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1301

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is indefinite as to the relationship between the means for heating and the means for cooling and the remainder of the structure in the ferroelectric device. Is this intended to be an apparatus? If an apparatus is intended, then are the prestress and ferroelectric layers part of the apparatus?

All dependent claims 2-8 are directed to a "method", thereby rendering these claim indefinite as to what is intended.

### ***Conclusion***

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Both Saito et al (U.S. Patent No. 5,042,493) and Zilinskas (U.S. Patent No. 3,631,383) teach piezoelectric devices and apparatus for their manufacture.

Serial Number: 08/797,553

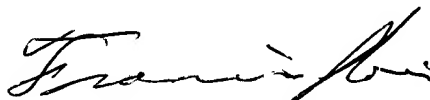
Page 3

Art Unit: 1301

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis J. Lorin whose telephone number is (703) 308-2061.

Any inquiry of a general nature can be directed to the Group receptionist at (703) 308-0651.

The FAX number for Group art unit 1301 is (703) 305-7115.



FRANCIS J. LORIN  
PATENT EXAMINER  
ART UNIT 1301

Francis J. Lorin  
July 21, 1997